



UNITED STATES PATENT AND TRADEMARK OFFICE

A

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/707,912	01/23/2004	Jim Wlos	3032	1911
31424	7590	03/09/2006	EXAMINER	
BABCOCK IP LLC 24154 LAKESIDE DRIVE LAKE ZURICH, IL 60047			LEON, EDWIN A	
			ART UNIT	PAPER NUMBER
			2833	

DATE MAILED: 03/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/707,912	Applicant(s) WLOS, JIM	
	Examiner Edwin A. León	Art Unit 2833	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's Pre-Appeal Brief Request for Review filed November 14, 2005 has been placed of record in the file.
2. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-2, 4 and 8-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Haller et al. (U.S. Patent No. 6,149,448). With regard to Claims 1 and 4, Haller et al. (Figs. 1-7) discloses a connector interface for connecting to a cylindrical female connector body (15) having an outer diameter surface (Fig. 2) and a bore (Fig. 2) with

Art Unit: 2833

an inner diameter surface (inside 15), comprising: a male connector body (12) with a plurality of spring fingers (parts of 36 in which 74 are located) biased for an interference fit upon the outer diameter surface; a front end portion of a sleeve (43) of the male connector body adapted to insert within the bore; and a first spring (41) located on an outer diameter of the sleeve.

The limitation "the first spring is dimensioned whereby the first spring elastically deforms between the sleeve and the inner diameter surface upon mating of the male connector body with the female connector body" has been given little patentable weight since it has been held that the functional language "whereby" statement does not define any structure and accordingly can not serve to distinguish. *In re Mason*, 114 USPQ 127, 44 CCPA 937 (1957).

With regard to Claim 2, Haller et al. (Figs. 1-9) discloses the first spring being located by a first groove (Fig. 9) formed in the outer diameter of the sleeve.

With regard to Claim 8, Haller et al. (Figs. 1-7) discloses an inner conductor contact (42) positioned coaxially within a sleeve (43) bore by an insulator (56).

With regard to Claim 9, Haller et al. (Figs. 1-7) discloses each of the plurality of spring fingers having an angled face.

With regard to Claim 10, Haller et al. (Figs. 1-7) discloses the sleeve is formed as a separate component press-fit into place within the male connector body.

With regard to Claim 11, Haller et al. (Figs. 1-7) discloses the sleeve being press-fit within the male connector body up to an internally projecting shoulder (52) of the male connector body.

With regard to Claim 12, Haller et al. (Figs. 1-7) discloses a connector interface between a female connector (15) and a male connector (12), comprising: a plurality of spring fingers (parts of 36 in which 74 are located) formed in a leading edge of the male connector; a sleeve (43) within the male connector and a first spring (41) on an outer diameter of the sleeve; the plurality of outer spring fingers biased to engage an outer diameter surface of the female connector, the sleeve adapted for insertion within a bore (Fig. 2) of the female connector.

The limitation "whereby the spring is deformed between the sleeve and an inner diameter surface of the bore" has been given little patentable weight since it has been held that the functional language "whereby" statement does not define any structure and accordingly can not serve to distinguish. *In re Mason*, 114 USPQ 127, 44 CCPA 937 (1957).

With regard to Claim 13, Haller et al. (Figs. 1-7) discloses the first spring being located by a first groove (Fig. 9) formed in an outer diameter of the sleeve.

5. Claims 1-4, 8 and 10-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Hall et al. (U.S. Patent No. 6,695,636). With regard to Claims 1 and 4, Hall et al. (Fig. 3) discloses a connector interface for connecting to a cylindrical female connector body (145) having an outer diameter surface (Fig. 6) and a bore (inside 145) with an inner diameter surface (inside 145), comprising: a male connector body (20, 25, 35) with a plurality of spring fingers (50) biased for an interference fit upon the outer diameter surface; a front end portion (25) of a sleeve (25, 35) of the male connector

body adapted to insert within the bore; and a first spring (33) located on an outer diameter of the sleeve.

The limitation “the first spring is dimensioned whereby the first spring elastically deforms between the sleeve and the inner diameter surface upon mating of the male connector body with the female connector body has been given little patentable weight since it has been held that the functional language “whereby” statement does not define any structure and accordingly can not serve to distinguish. *In re Mason*, 114 USPQ 127, 44 CCPA 937 (1957).

With regard to Claim 2, Hall et al. (Fig. 3) discloses the first spring being located by a first groove (Fig. 3) formed in the outer diameter of the sleeve.

With regard to Claim 3, Hall et al. (Fig. 3) discloses the first spring being a canted coil spring (33).

With regard to Claim 8, Hall et al. (Fig. 3) discloses an inner conductor contact (41) positioned coaxially within a sleeve bore by an insulator (35).

With regard to Claim 10, Hall et al. (Fig. 3) discloses the sleeve is formed as a separate component press-fit into place within the male connector body.

With regard to Claim 11, Hall et al. (Fig. 3) discloses the sleeve being press-fit within the male connector body up to an internally projecting shoulder (34) of the male connector body.

With regard to Claim 12, Hall et al. (Fig. 3) discloses a connector interface between a female connector (145) and a male connector (20, 25, 35), comprising: a plurality of spring fingers (50) formed in a leading edge of the male connector; a sleeve

Art Unit: 2833

(25, 35) within the male connector and a first spring (33) on an outer diameter of the sleeve; the plurality of outer spring fingers biased to engage an outer diameter surface of the female connector, the sleeve adapted for insertion within a bore (inside 145) of the female connector.

The limitation "whereby the spring is deformed between the sleeve and an inner diameter surface of the bore" has been given little patentable weight since it has been held that the functional language "whereby" statement does not define any structure and accordingly can not serve to distinguish. *In re Mason*, 114 USPQ 127, 44 CCPA 937 (1957).

With regard to Claim 13, Hall et al. (Fig. 3) discloses the first spring being located by a first groove (Fig. 3) formed in an outer diameter of the sleeve.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 5-6, 14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haller et al. (U.S. Patent No. 6,149,448) in view of Maury (U.S. Patent No. 6,210,221). Haller et al. discloses the claimed invention except for a second groove located around the plurality of outer spring fingers; a second spring positioned in

the second groove biasing the plurality of outer spring fingers inward and the female connector being one of an SMA and a Type N connector.

Maury (Figs. 3-4) discloses a similar connector having a second groove (where 20 is located) located around a plurality of outer spring fingers (15); a second spring (20) positioned in the second groove biasing the plurality of outer spring fingers inward and the female connector being one of an SMA (Column 1, Lines 42-46) and a Type N connector (Column 1, Lines 54-58).

Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the connector of Haller et al. by including a second groove located around the plurality of outer spring fingers; a second spring positioned in the second groove biasing the plurality of outer spring fingers inward and the female connector being one of an SMA and a Type N connector as taught in Maury in order to provide quick connect/disconnect coaxial electrical connections.

8. Claims 6 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hall et al. (U.S. Patent No. 6,695,636) in view of Maury (U.S. Patent No. 6,210,221). Hall et al. discloses the claimed invention as shown above except for the female connector being one of an SMA and a Type N connector.

Maury (Figs. 3-4) discloses a similar connector having a second groove (where 20 is located) located around a plurality of outer spring fingers (15); a second spring (20) positioned in the second groove biasing the plurality of outer spring fingers inward

and the female connector being one of an SMA (Column 1, Lines 42-46) and a Type N connector (Column 1, Lines 54-58).

Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the interface of Hall et al. by the female connector being one of an SMA and a Type N connector as taught in Applicant's admitted prior art in order to make the connector more versatile.

9. Claims 7 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haller et al. (U.S. Patent No. 6,149,448). Haller et al. discloses the claimed invention except for the female connector has a third groove located on the inner diameter surface; the third groove adapted to align with the first groove when the male connector body is seated against the female connector and the third groove adapted to receive an inner diameter contacting portion of the first spring when the male connector body is seated against the female connector and a third groove adapted to engage the first spring is located on the inner diameter surface of the bore.

Still, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the female connector having a third groove located on the inner diameter surface; the third groove adapted to align with the first groove when the male connector body is seated against the female connector and the third groove adapted to receive an inner diameter contacting portion of the first spring when the male connector body is seated against the female connector and a third groove adapted to engage the first spring is located on the inner diameter surface of the bore, since it has

been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

10. Claims 7 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hall et al. (U.S. Patent No. 6,695,636). Hall et al. discloses the claimed invention as shown above except for the female connector has a third groove located on the inner diameter surface; the third groove adapted to align with the first groove when the male connector body is seated against the female connector and the third groove adapted to receive an inner diameter contacting portion of the first spring when the male connector body is seated against the female connector.

Still, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the female connector having a third groove located on the inner diameter surface; the third groove adapted to align with the first groove when the male connector body is seated against the female connector and the third groove adapted to receive an inner diameter contacting portion of the first spring when the male connector body is seated against the female connector, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Response to Arguments

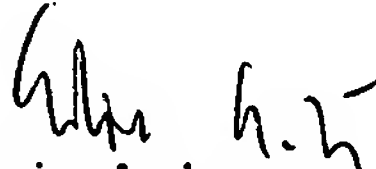
11. Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion


12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edwin A. León whose telephone number is (571) 272-2008. The examiner can normally be reached on Monday - Friday 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on 571-272-2800, extension 33. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Edwin A. Leon
AU 2833

EAL
February 27, 2006


TRUCT. NGUYEN
PRIMARY EXAMINER